

Claims:

1. An isolated double stranded short interfering
ribonucleic acid (siRNA) molecule that represses or
5 silences expression of STAT6 nucleic acid or protein.

2. An siRNA as claimed in claim 1, wherein the sense
strand of the siRNA comprises a contiguous nucleotide
sequence, wherein the base sequence of the sense strand
10 has at least 70% sequence identity to the base sequence
of a contiguous nucleotide sequence of corresponding
length which is contained in the mRNA sequence encoded by
one of the human, mouse or rat STAT6 nucleotide sequences
(SEQ ID No.s 10, 12 or 14)

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3. An siRNA according to claim 2 wherein the contiguous
nucleotide sequence of corresponding length contained in
the mRNA sequence is the RNA sequence of any one of SEQ
ID No.s 5-8 or the RNA sequence encoded by any one of SEQ
20 ID No.s 15-18.

4. An siRNA as claimed in any one of claims 1, 2 or 3,
wherein the antisense strand of the siRNA comprises a
contiguous nucleotide sequence, wherein the base sequence
25 of the antisense strand has at least 70% sequence
complementarity to the base sequence of a contiguous
nucleotide sequence of corresponding length which is
contained in one of the RNA sequences encoded by the
human, mouse or rat STAT6 nucleotide sequences (SEQ ID
30 No.s 10, 12 or 14).

5. An siRNA according to claim 4 wherein the contiguous
nucleotide sequence of corresponding length contained in

the RNA sequence is encoded by any one of SEQ ID No.s 15-18.

5 6. An siRNA according to any one of claims 2 to 5 wherein said degree of sequence identity or complementarity is at least 80%.

10 7. An siRNA according to any one of claims 2 to 5 wherein said degree of sequence identity or complementarity is at least 90%.

15 8. An siRNA according to any one of claims 2 to 5 wherein said degree of sequence identity or complementarity is at least 95%.

9. An siRNA according to any one of claims 2 to 5 wherein said degree of sequence identity or complementarity is at least 97%.

20 10. An siRNA as claimed in any one of claims 1 to 9, wherein said anti-sense strand is complementary to said sense strand.

25 11. An siRNA as claimed in any one of claims 1 to 10, wherein the sense and antisense strands are of the same length.

30 12. An siRNA as claimed in any one of claims 1 to 11 wherein each strand has a length in the range of 10 to 30 nucleotides.

13. An siRNA as claimed in any one of claims 1 to 11 wherein each strand has a length in the range of 15 to 25 nucleotides.

5 14. An siRNA as claimed in any one of claims 1 to 11 wherein each strand has a length in the range of 18 to 23 nucleotides.

10 15. An siRNA as claimed in any one of claims 1 to 11 wherein each strand has a length of 19, 20, 21 or 22 nucleotides.

15 16. An siRNA according to any one of the preceding claims wherein the antisense strand hybridises to the mRNA encoded by one of SEQ ID No.s 10, 12 or 14 under high or very high stringency conditions.

20 17. An siRNA according to any one of the preceding claims wherein the sense strand hybridises to one of SEQ ID No.s 10, 12 or 14 under high or very high stringency conditions.

25 18. An siRNA according to any one of the preceding claims wherein the sense or antisense strand hybridises to the corresponding other strand of one of SEQ ID No.s 1-4 under high or very high stringency conditions.

30 19. An siRNA according to any one of the preceding claims wherein each strand of the siRNA has a sequence identity of at least 70% to the corresponding strand of any one of SEQ ID No.s 1-4.

20. An siRNA according to any one of the preceding claims wherein the antisense strand has at least 70% sequence complementarity over the entire length of said siRNA to a portion or fragment of an RNA sequence coding for a STAT6 protein.

21. An siRNA according to any one of the preceding claims wherein the sense strand has at least 70% sequence identity over the entire length of said siRNA to a portion or fragment of a STAT6 mRNA.

22. An siRNA as claimed in claim 20 or 21 wherein said RNA sequence or mRNA is the RNA or mRNA encoded by one of SEQ ID No.s 10, 12 or 14.

23. An siRNA according to any one of the preceding claims comprising SEQ ID No.1.

24. An siRNA according to any one of the preceding claims comprising SEQ ID No.2.

25. An siRNA according to any one of the preceding claims comprising SEQ ID No.3.

26. An siRNA according to any one of the preceding claims comprising SEQ ID No.4.

27. The siRNA of SEQ ID No.1.

28. The siRNA of SEQ ID No.2.

29. The siRNA of SEQ ID No.3.

30. The siRNA of SEQ ID No.4.

31. An siRNA as claimed in any one of claims 1 to 30
wherein said siRNA represses the function of STAT6
protein.

32. An siRNA as claimed in any one of claims 1 to 31 for
use in the treatment of allergic or non-allergic disease.

33. A pharmaceutical composition comprising an siRNA as
claimed in any one of claims 1 to 31.

34. A pharmaceutical composition as claimed in claim 33
wherein said pharmaceutical composition is formulated for
oral or nasal administration.

35. A pharmaceutical composition as claimed in claim 33
or 34 further comprising a pharmaceutically acceptable
diluent, carrier or adjuvant.

36. A pharmaceutical composition as claimed in claim 35
wherein said carrier is a lipophilic carrier or vesicle.

37. Use of an siRNA as claimed in any one of claims 1 to
31 in the manufacture of a medicament for the treatment
of allergic or non-allergic disease.

38. The use claimed in claim 37 wherein said medicament
is formulated for oral, inhalational or nasal
administration.

39. A method of treating allergic or non-allergic
disease in a patient in need of such treatment comprising

the steps of administering to the patient an siRNA or pharmaceutical composition as claimed in any one of claims 1 to 36.

5 40. The method of claim 39 wherein said siRNA is formulated as part of a pharmaceutical composition administered to the patient.

10 41. The method of claim 40 wherein said pharmaceutical composition is formulated for oral, inhalational or nasal administration.

15 42. An siRNA, pharmaceutical composition, use or method as claimed in claim any one of claims 32 to 41 wherein said allergic or non-allergic disease is an allergic or non-allergic disease of the respiratory tract selected from asthma, non-atopic asthma and/or rhinitis.

20 43. A method for repressing the cellular expression of STAT6 mRNA and/or protein in vitro comprising: in vitro, contacting a cell with an siRNA as claimed in any one of claims 1 to 31.

25 44. A method according to claim 43 wherein said cell is a mammalian cell.

45. A method according to claim 43 wherein said cell is a human cell.

30 46. A method according to any one of claims 43 to 45 wherein said cell is from the respiratory tract or is the progeny of a cell from the respiratory tract.

47. A cell, in vitro, in which STAT6 protein or nucleic acid expression or function is repressed or silenced.

5 48. A cell according to claim 47 wherein said cell comprises an siRNA as claimed in any one of claims 1 to 31.

49. A cell according to claim 47 or 48 wherein said cell is a mammalian cell.

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50. A cell according to any one of claims 47 to 49 wherein said cell is a human cell.

15 51. A cell according to any one of claims 47 to 50 which is from the respiratory tract or is the progeny of a cell from the respiratory tract.